NODE CONGRESS

Five ways of taking advantage of Verdaccio, your private and proxy Node.js registry

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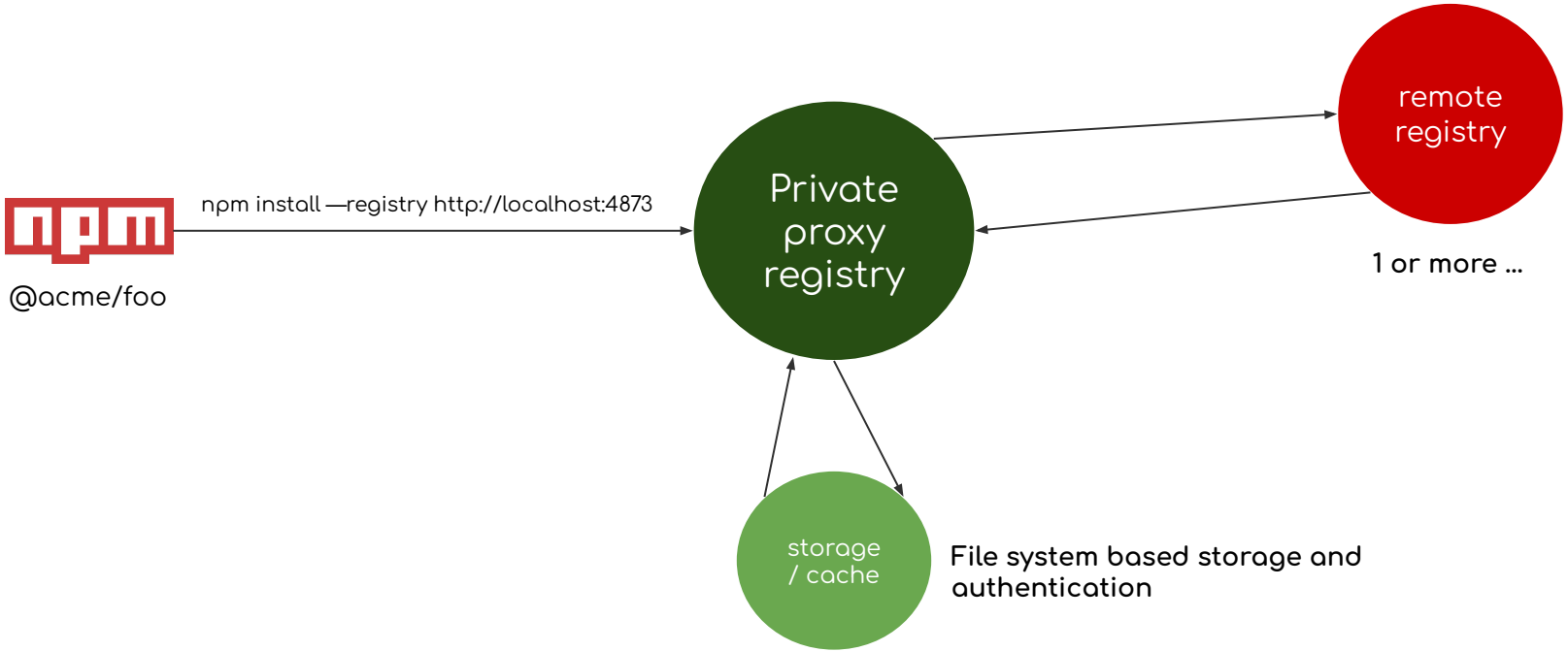
Verdaccio is a lightweight private proxy registry for Node.js built in JavaScript



Installing Verdaccio

Running Verdaccio in a terminal

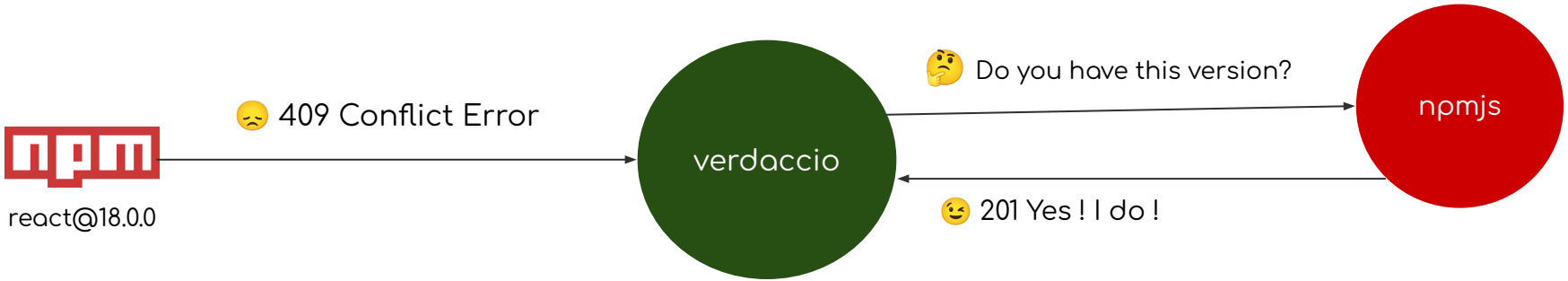
1 Personal Development

Publishing private packages

Demo, let's publish a private package with npm workspaces ...

Constraints, cannot override remote published versions ...

npm publish —registry http://localhost:4873



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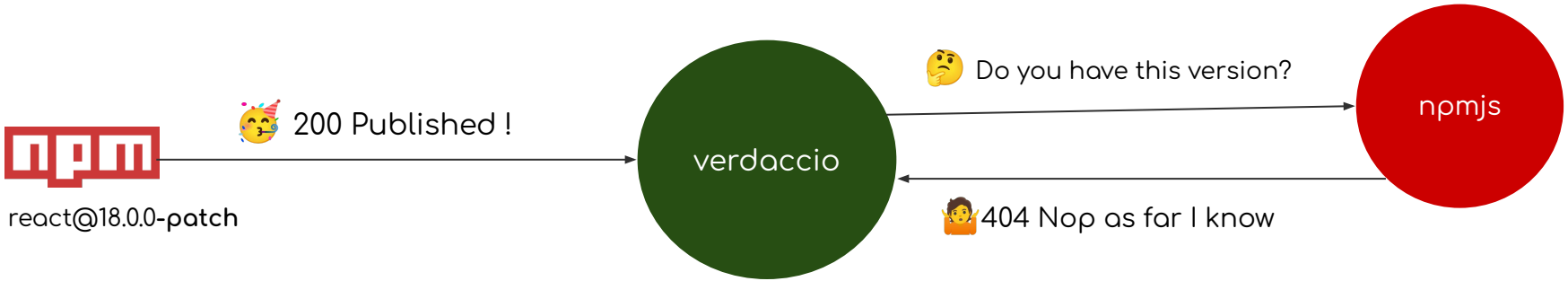
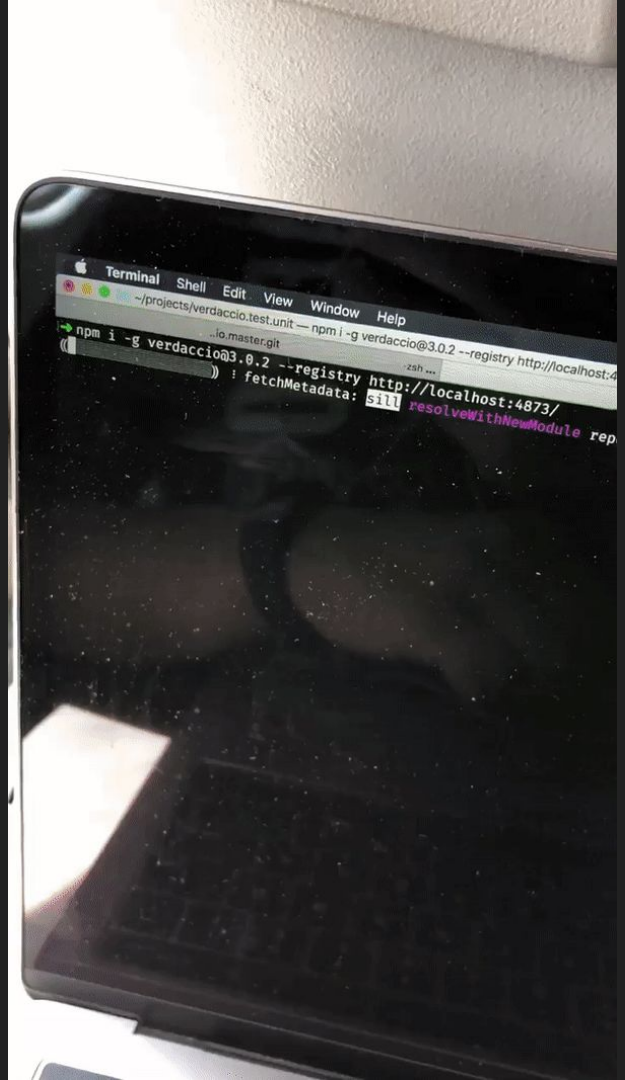




Installing in offline mode ...

https://twitter.com/jotadeveloper/status/1015333131002564608

```yaml
# config.yaml

storage: /home/user/.local/share/verdaccio/storage

# Publishing offline
publish_offline: true

packages:
  '@acme/*':
    access: $authenticated
    publish: $all
    ## ofline
    # proxy: npmjs
  '@*/*':
    access: $all
    publish: $all
    unpublish: $authenticated
    proxy: npmjs
```

Publishing with no network using publish_offline

2 Project productivity

Continuous Integration and private registries

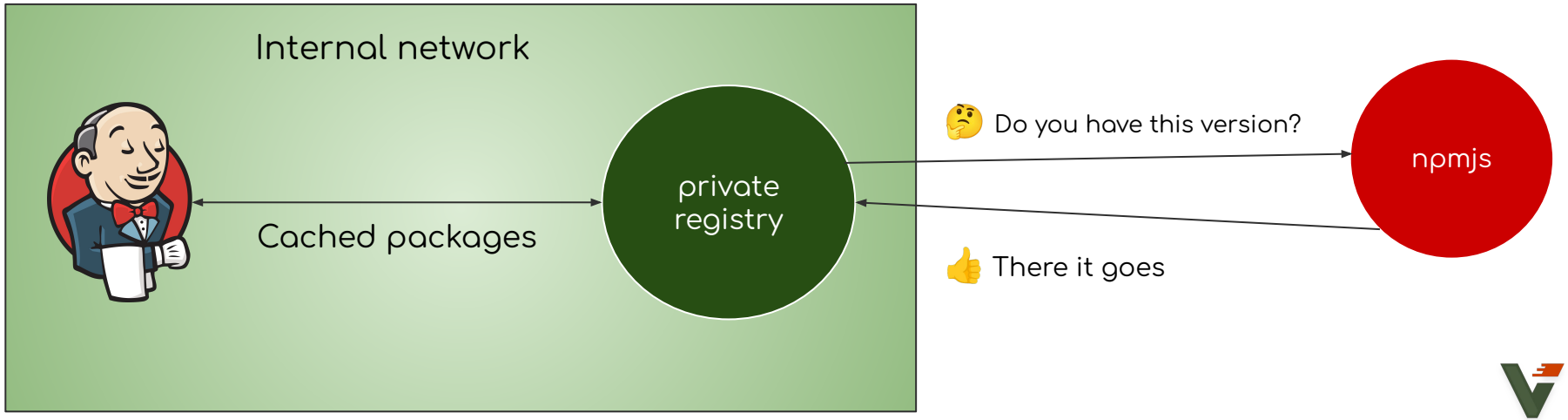
Matteo Collina
@matteocollina

I'm still surprised that having a private npm registry is not a standard across dev teams. Private npm, npm enterprise, artifactory, verdaccio: use what you prefer, but if you are not using them you are missing a lot.

Traducir Tweet

6:49 p. m. · 26 feb. 2019 · Twitter Web Client

Private registries increase reliability in your builds and development workflows



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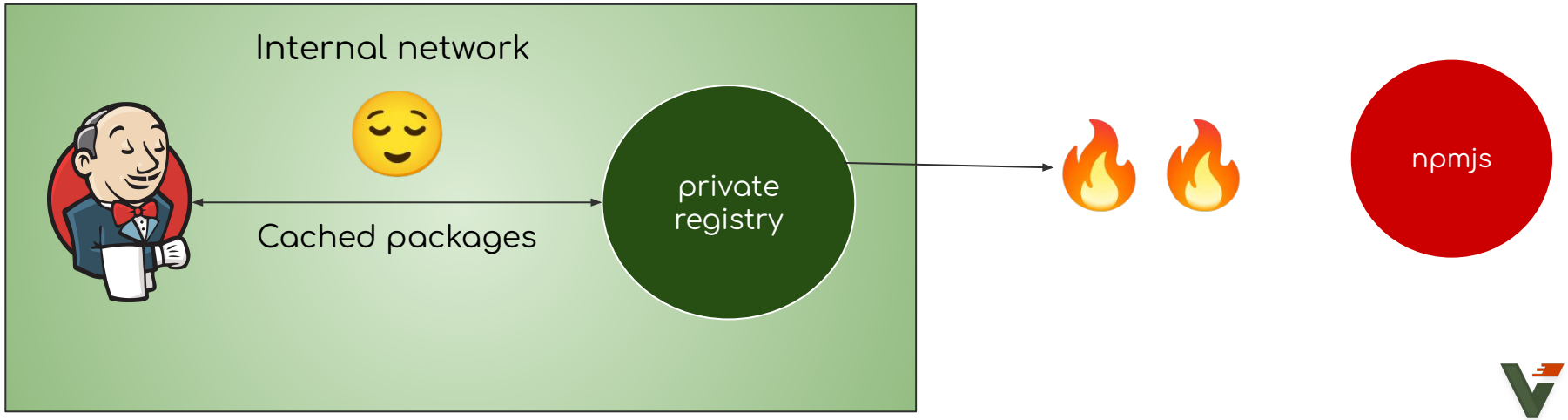


Private registries increase reliability in your builds and development workflows

```
uplinks:
  public:
    url: https://registry.npmjs.org
    maxage: 2w # 2 weeks
    timeout: 30s  # 30 seconds
    cache: false # only cache manifest
    strict_ssl: true
    max_fails: 10 # maximum failures
```

3 Improve Security

Protecting your packages

https://blog.includesecurity.com/2021/02/dependency-confusion-when-are-your-npm-packages-vulnerable/

```
uplinks:
  npmjs:
    url: https://registry.npmjs.org/
packages:
  '@acme/*':
    access: $authenticated
    publish: $authenticated
    unpublish: $authenticated
    # proxy: npmjs
```

Remove the proxy property for private packages this is highly recommendable.

```
{
  "name": "@acme/auth",
  "private": "true",
  "version": "1.0.0",
  "description": "always use scoped packages in your organization",
  "dependencies": {
    "@acme/internal": "4.x",
    "external": "1.x"
  }
}
```

Protect your projects in the client side
https://snyk.io/blog/ten-npm-security-best-practices/

Enable rate limiting for critical endpoints

```
Request URL: https://xxx.your.domain/-/verdaccio/data/packages
access-control-allow-origin: *
content-security-policy: connect-src 'self'
date: Sat, 29 Jan 2022 14:06:29 GMT
etag: "ba022b843888513a6218d751c275ab62"
server: nginx/1.14.0 (Ubuntu)
x-content-type-options: nosniff
x-frame-options: deny
x-ratelimit-limit: 1000
x-ratelimit-remaining: 998
x-ratelimit-reset: 1643465244
x-robots-tag: noindex, nofollow, nosnippet, noarchive
x-xss-protection: 1; mode=block
```

```
userRateLimit:
  windowMs: 50000
  max: 1000
```

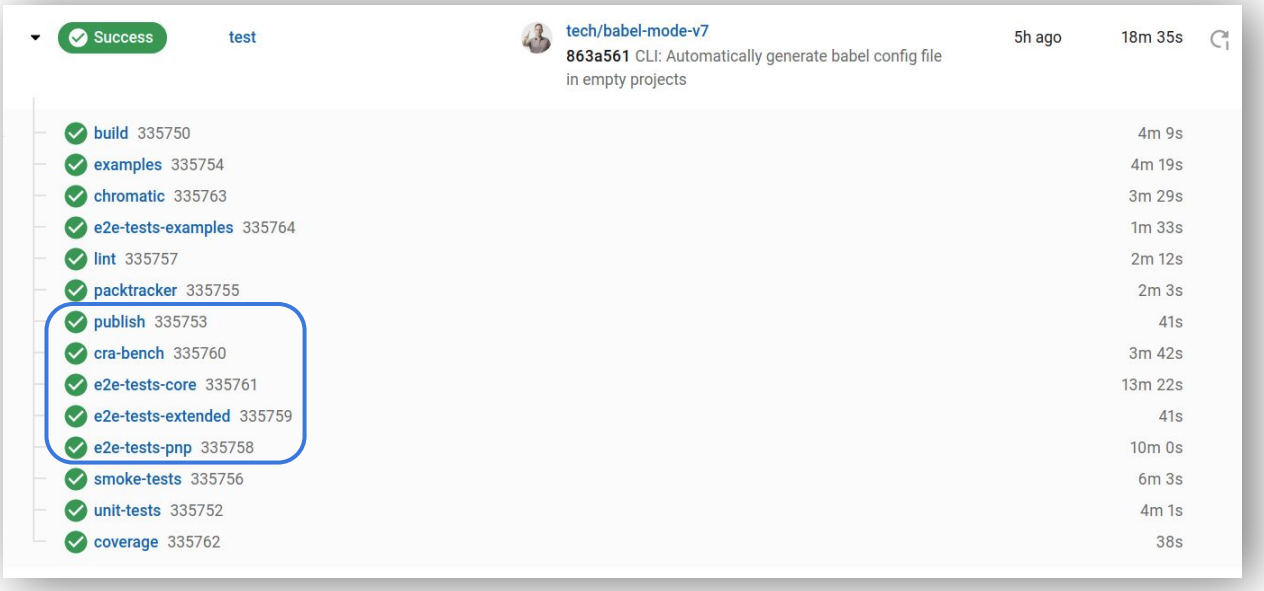
4 End to End Testing

Test the integrity of your packages

Publishing a package to thousands of users that download it every week requires high integrity, End to End your packages publishing in a registry ensure quality.

Storybook

Test publishing your packages on every Pull Request



Demo, run a End to End with **GitHub Actions** and Docker ...

https://github.com/juanpicado/e2e-ci-example-gh-actions

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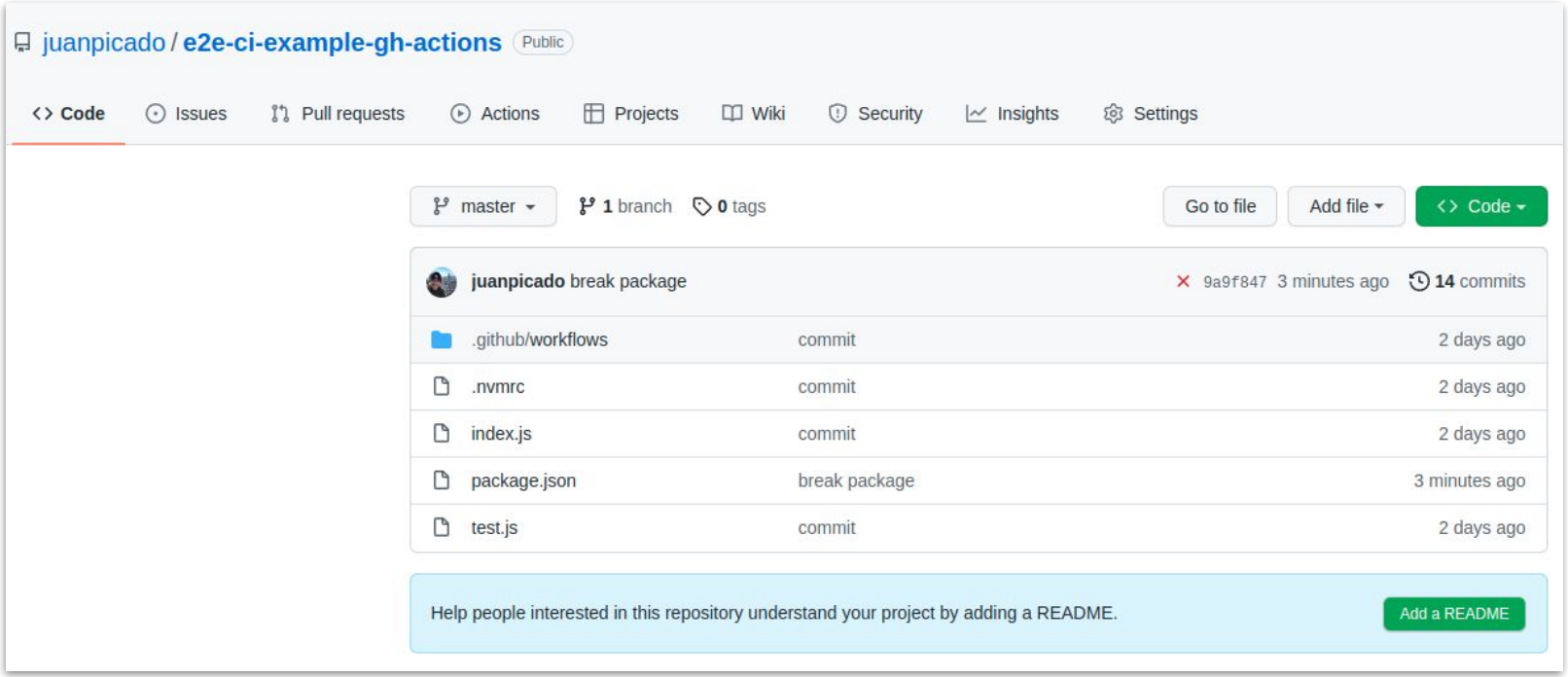
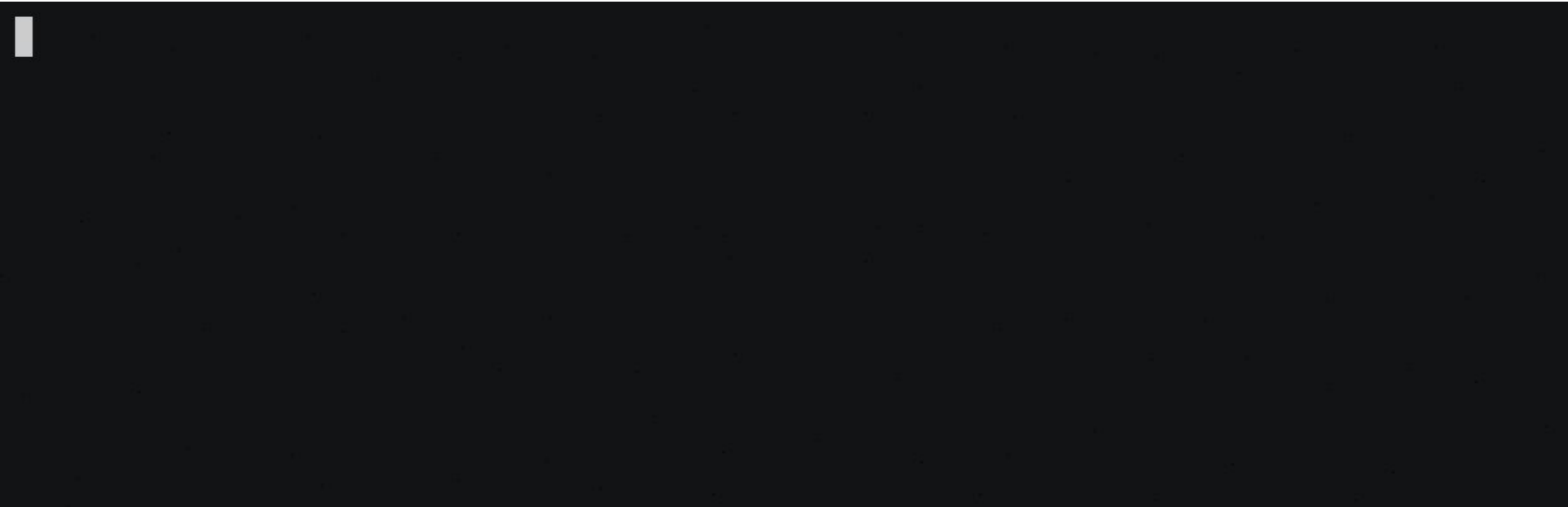


Use memory plugins to speed up test

```
store:
  memory:
    limit: 1000
```



Dive into open source project for more learnings, every project is different.

```
# Babel.js
function startLocalRegistry {
  # Start local registry
  tmp_registry_log=`mktemp`
  echo "Registry output file: $tmp_registry_log"
  (cd && nohup npx verdaccio@~5.1.2 -c $1 &>$tmp_registry_log &)
  YARN_IGNORE_PATH=1 yarn global add verdaccio-memory@~10.0.0
  # Wait for Verdaccio to boot
  grep -q "http address" <(tail -f $tmp_registry_log)
  ...
```

With **bash** scripts

Dive into open source project for more learnings, every project is different.

```ts
// Angular-CLI
import { ChildProcess, spawn } from 'child_process';

export function createNpmRegistry(withAuthentication = false): ChildProcess {
  // Setup local package registry
  const registryPath = mkdtempSync(join(realpathSync(tmpdir()), 'angular-cli-e2e-registry-'));

  copyFileSync(
    join(__dirname, '../../', withAuthentication ? 'verdaccio_auth.yaml' : 'verdaccio.yaml'),
    join(registryPath, 'verdaccio.yaml'),
  );

  return spawn('node', [require.resolve('verdaccio/bin/verdaccio'), '-c', './verdaccio.yaml'], {
    cwd: registryPath,
    stdio: 'inherit',
  });
```

With **spawn** from **child_process** module

Dive into open source project for more learnings, every project is different.

```
// StoryBook
import startVerdaccioServer from 'verdaccio';

startVerdaccioServer(config, 6000, cache, '1.0.0', 'verdaccio', function onReady() {
  // do something
});
```

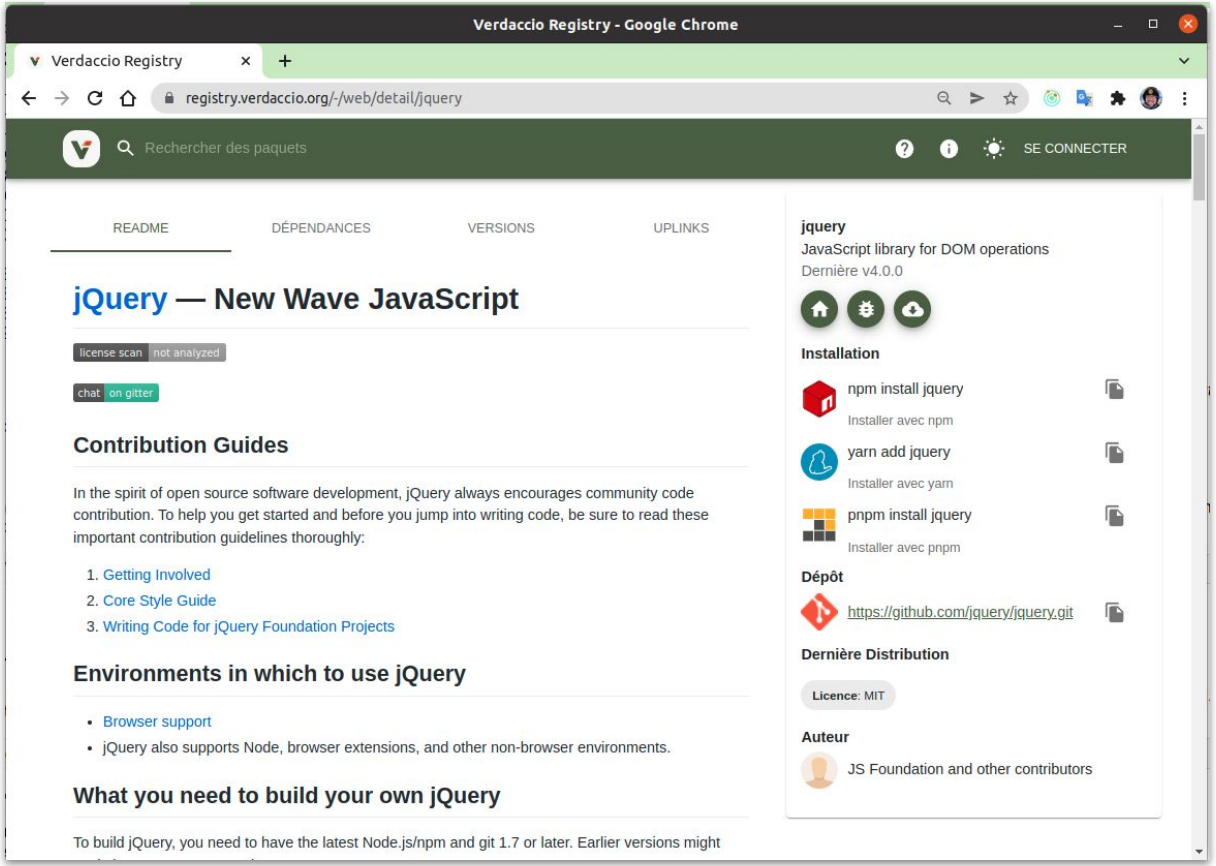
Programmatically with the verdaccio module

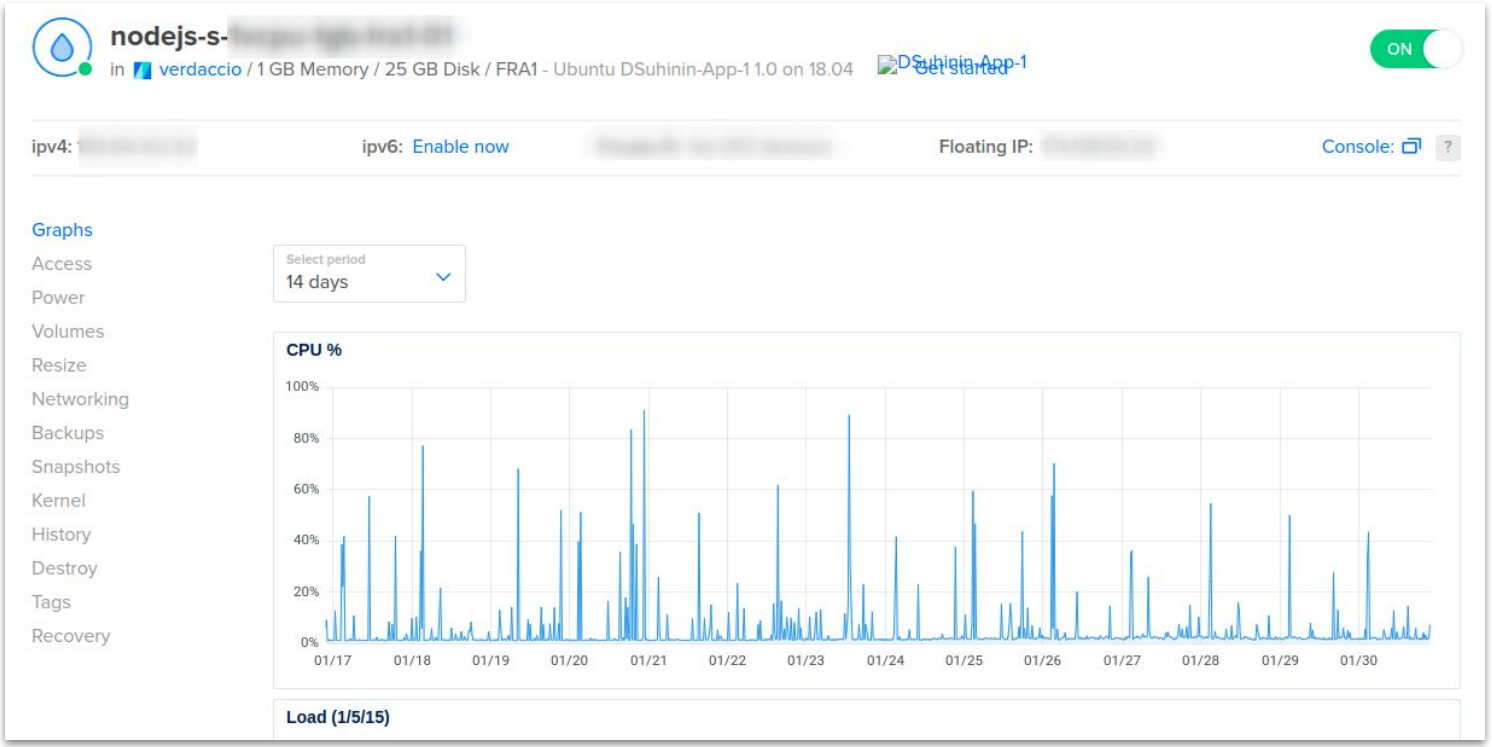
Storybook

5 Hosting a Registry

Security and flexibility

A very easy
deployment





pm2 + Nginx + Verdaccio

https://verdaccio.org/blog/2018/11/19/setting-up-verdaccio-on-digitalocean/

Extend the default configuration

- Use a different storage (S3, Minio)
- Use different authentication
  - Eg: GitLab, GitHub Oauth, etc ...
- Use your own User Interface
- Apply your own express middleware
  - Eg: npm audit (middleware plugin)

Thank you

https://verdaccio.org/

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